UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,849	06/25/2001	Steven Verhaverbeke	004711/P1	4749

32588 7590 01/25/2007

APPLIED MATERIALS, INC.
P. O. BOX 450A
SANTA CLARA, CA 95052

EXAMINER	
MARKOFF, ALEXANDER	
ART UNIT	PAPER NUMBER
1746	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
31 DAYS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/891,849	VERHAVERBEKE ET AL.	
	Examiner	Art Unit	
	Alexander Markoff	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 November 2006*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-16,18,19,22-25,45,52 and 208-241* is/are pending in the application.

4a) Of the above claim(s) *208-220* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-3, 5-16, 18, 19, 22-25, 45, 45, 52 and 221-241* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. The applicants amended the claims. The applicants deleted some of the previously presented limitations and introduced some limitations, which were not previously presented in the claims. The previously examined claims as amended are directed to two patentable distinct inventions. The invention of Group I, claims 1-3, 5-16, 18, 19, 22-25 and newly submitted claims 221-227. The invention of Group II, claims 45, 46, 52 and newly submitted claims 228-241.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-3, 5-16, 18, 19, 22-25 and newly submitted claims 221-227, drawn to an apparatus, classified in class 134, subclass 184.

II. Claims 45, 46, 52 and newly submitted claims 228-241, drawn to an apparatus, classified in class 134, subclass 184.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions of Group I and Group II are directed to related apparatuses. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed have a materially different design and mode of

operation. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

The invention of Group I requires an acoustic generator; a wafer bracket for positioning a wafer over the acoustic generator; a liquid dispenser for flowing liquid between the acoustic generator and the wafer; the liquid being in extensive contact with the generator and the wafer and being the predominant means for transferring acoustic energy from the generator to the wafer; a second dispenser for flowing a processing liquid on the wafer; and a frequency and intensity of the acoustic energy to provide a substantive improvement in the cleaning performance and minimizing the associated risk of damage.

The invention of Group II requires a platter having a front side and a back side; plurality megasonic piezoelectric transducers attached to the back side of the platter; a wafer bracket to position a wafer over the platter front side parallel to the front side to form a gap between the wafer and the front side; a feed port for flowing a liquid in the gap, wherein the liquid fills the gap extensively; a nozzle for directing a liquid onto the wafer; and wherein the transducers apply megasonic energy to the platter, which transfers the energy to the liquid in the gap, which transfers the energy to the wafer.

Thus, the invention of Group I requires an acoustic generator in contact with a liquid, the liquid providing predominant means for transferring acoustic energy, and specific frequency and intensity of the energy. These are not required by the invention of Group II. The invention of Group II does not require the contact between the transducers and the liquid. In contrast it requires a platter, which contacts the liquid and

has transducers on the backside, the side, which does not require to contact the liquid. Thus, the liquid in the invention of Group II is not require to be predominant means for transferring energy from the generator to the wafer. The invention of Group II also requires a nozzle for directing a liquid to the wafer, such is not required by the invention of Group II, which requires a dispenser for flowing the liquid. Further, the Invention of Group II does not require the specifics of the frequency and intensity of the acoustic energy required by the invention of Group I. The Invention of Group I does not require megasonic, which is required by the invention of Group II.

4. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

5. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of

record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. The request to rejoin the withdrawn claims 208-220 is noted. However, the restriction between the referenced claims and the previously examined claims was made final in the previous Office action. The request is not timely filed.

Moreover, it is noted that the applicants did not amended the withdrawn claims. The applicants amended only examined claims. The applicant's statement that the withdrawn claims contain only limitations of the newly amended claims raises the question whether the examined claims were properly amended because sifting of the claimed invention is not proper.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Markoff whose telephone number is 571-272-1304. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alexander Markoff
Primary Examiner
Art Unit 1746

AM

ALEXANDER MARKOFF
PRIMARY EXAMINER